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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/817,429

04/05/2004

Shuhei Harada

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07/17/2006

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EXAMINER

FRANTZ, JESSICA L

ART UNIT

PAPER NUMBER

3746

DATE MAILED: 07/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding..

Office Action Summary	Application No. 10/817,429	Applicant(s) HARADA, SHUHEI	
	Examiner Jessica L. Frantz	Art Unit 3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/23/2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 20, 22 and 23 is/are rejected.
- 7) ☒ Claim(s) 1-20, 22 and 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/23/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. JP 2003-101868, filed on 4/4/2003.

Information Disclosure Statement

2. The Information Disclosure Statement (IDS) submitted on 8/23/2004 is acknowledged. The references listed therein have been considered.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 22 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim recites that "a portion of the flexible tube accommodated in the accommodating case forms an omega shape." However, the shape of the flexible tube in the accommodating case as disclosed in the specification and Figures 4, 5, and 12-18 is circular. The portion of the tubing that extends outside of the accommodating case forms the "legs" of the typical omega shape. Therefore, the claim is rendered unclear and ambiguous.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-6, 9-10 and 20, 22 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by D'Arcey et al. (2,988,001). D'Arcey et al discloses a tube pump (P-1) comprising: a flexible tube (180) in which a fluid passage is formed (The inside of flexible tube 180); an accommodating case (60) for accommodating the flexible tube, the tube extending along an inner wall (62) of the case, the inner wall having an opening (166, 168), the tube extending to the exterior of the case through the opening, the tube having a first portion (Inlet side of flexible tube 180) and a second portion (outlet side of flexible tube 180), which are located close to each other in the vicinity of the opening; a pressing member (80) revolving in the accommodating case, the pressing member moving from the first portion to the second portion along the flexible tube while pressing and squeezing a portion of the tube against the inner wall of the case, thereby enabling a fluid to flow from the first portion to the second portion in the fluid passage; and an auxiliary member (170) provided in the vicinity of the opening of the accommodating case, the auxiliary member having an auxiliary surface (Not labeled. See Figure 5, inner most surface of 170), the auxiliary member transferring the pressing member from the second portion to the first portion via the auxiliary surface when the pressing member passes the vicinity of the opening of the case.

Furthermore, D'Arcey et al. teaches that when the auxiliary surface receives the pressing member from the second portion or passes the pressing member to the first portion, the auxiliary surface is connected smoothly with a portion of an outer

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circumferential surface of the flexible tube spaced from the inner wall. In observing Figure 5, one can tell that this smooth connection occurs. Also, as shown in Figure 5, the inner wall has a substantially circular shape. Moreover, the pressing member revolves around a revolution axis and the inner wall is formed around the revolution axis. (Please see Figure 5, the pressing member revolves and inner wall is centered around the central axis of the shaft).

Additionally, D'Arcey et al. discloses that the flexible tube includes a first extending portion extending from the first portion to the exterior of the accommodating case and a second extending portion extending from the second portion to the exterior of the case (both the inlet and outlet side of the flexible tube extend beyond the accommodating case as depicted best in Figure 1), and the pressing member decreases the pressure in the first portion to draw the fluid to the passage through the first extending portion and discharge the fluid through the second extending portion. (That is the basic operation of any peristaltic type pump). Also, D'Arcey et al. teaches that the auxiliary member is located between the first portion and the second portion. (Please refer to Figure 5).

Moreover, D'Arcey et al. discloses that when the auxiliary surface is free from the pressing force of the pressing member, the auxiliary surface extends substantially parallel with a plane that is extended from the inner wall of the accommodating case at the opening, and the auxiliary surface is located inward of the extended plane in the case. Because the auxiliary member is screwed into place by screws 172, the auxiliary member and consequently the auxiliary surface will remain in the position shown in

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Figure 5 which is substantially parallel with a plane extended from the inner wall of the accommodating case at the opening and the auxiliary surface is located inward of the extended plane in the case. Also, as indicated by screws 172, the auxiliary member is fixed to the accommodating case.

Additionally, D'Arcey teaches that the auxiliary member has a substantially triangular cross-sectional shape and includes a first surface opposing the first portion, a second surface opposing the second portion, and the auxiliary surface. As shown in Figure 5, the auxiliary member is substantially triangular where one surface, the auxiliary surface, faces the pressing member, on side opposes a first portion of the tubing and another side opposes the second portion of tubing. Further, it is taught that a portion of the flexible tube accommodated in the accommodating case forms an omega shape. While this claim, claim 22, was addressed previously in the 112 rejection section, one can see that since this is a flexible tube, it is inherently capable of forming the omega shape in the same manner as disclosed in the specification. And finally, D'Arcey discloses that the pressing member revolves around the revolution axis, wherein the flexible tube does not have overlapped portions in the accommodating case with respect to the revolution axis. As shown in Figure 5, the pressing member revolves around the central axis of the shaft and the flexible tube as no overlapping portion with respect to that revolution axis.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over D'Arcey et al. (2,988,001). D'Arcey teaches that the auxiliary member is formed from an elastic material. He discloses the member is formed of plastic or other transparent material and since plastic is a fairly elastic material and he allows for any transparent material as well, the elastic limitation is met. (Column 4, lines 52-53). Also, since there is such a wide range of materials that are either plastic or transparent, it is possible to select the resilient force of the auxiliary member such that a reactive force of the flexible tube and the auxiliary member acting on the pressing member remains constant when the pressing member passes the vicinity of the opening. Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. In re Swain et al., 33 CCPA (Patents) 1250, 156 F.2d 239, 70 USPQ 412; Minnesota Mining and Mfg. Co. v. Coe, 69 App. D.C. 217, 99 F.2d 986, 38 USPQ 213; Allen et al. v. Coe, 77 App. D.C. 324, 135 F.2d 11, 57 USPQ 136. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide an elastic auxiliary member with the ability to select the resilient force of the auxiliary member such that a reactive force of the flexible tube and the auxiliary member acting on the pressing member remains constant when the pressing member passes the vicinity of the opening in order to allow the auxiliary member to easily resume it's original shape after being deformed or pressed upon by the pressing member and also to have the option of multiple levels of resilience in order

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to provide a constant reactive force on the flexible tube to provide for a smooth fluid flow with no interruptions for increased efficiency.

Allowable Subject Matter

7. Claims 11-19 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following references substantially teach the invention as claimed:

- Clemens (5,340,290)
- Ferrara et al. (2,102,523)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessica L. Frantz whose telephone number is 571-272-5822. The examiner can normally be reached on Monday through Friday 8:30a.m.-5:00p.m. E.S.T..

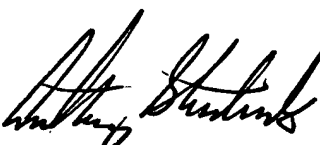
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Thorpe can be reached on (571)272-4444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

J.F.

JF



ANTHONY D. STASHICK
PRIMARY EXAMINER